

MISSILE WARHEAD REPLACEMENT TELEMETRY KIT MEMS IN GUIDED MUNITIONS

Operational testing of small-diameter, heat-seeking missiles requires telemetry data on the missile's response to infrared sources and countermeasures as well as the missile's trajectory and angle of attack history. To achieve this requirement, the HSTSS program teamed with the Naval Air Warfare Center (NAWC) to provide a miniature set of inertial sensors and a unique battery. NAWC's Advanced Missile Instrumentation Package (AMIP) can replace the warhead of a 2.75" Stinger missile and other small missiles. This kit features an inertial measurement unit using microelectromechanical system (MEMS) accelerometers and novel angular rate sensors. All AMIP components, telemetry system, IMU, and battery are COTS products that are packaged into the size of a soda can.



IMU Instruments

- Four Accelerometers
- Pitch-Rate Sensor
- Yaw-Rate Sensor
- Two-Axis Magnetic Sensor